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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/476,372      | 01/03/2000  | BYOUNG-CHUL SOHN     | Q57096              | 7742             |

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EXAMINER

MEHRPOUR, NAGHMEH

ART UNIT

PAPER NUMBER

2686

DATE MAILED: 07/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/476,372             | SOHN, BYOUNG-CHUL   |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Naghmeh Mehrpour       | 2686                |  |

**— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —**  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
 THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 14 April 2004.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 2-6 and 8 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 2-6 and 8 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

|   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date: _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____                                    |

***Claim Rejections - 35 USC §103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claims 2,** is rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz et al. (US Patent Number 5,555, 266) in view of Bauchot et al. (US Patent Number 6,141,336).

Regarding **Claim 2**, Buchholz teaches a wireless resource allocation method in a wireless communication system including a plurality of wireless terminals and a single access point having a bridge function, the method comprising the steps of:

**a) allocating a wireless resource to a corresponding wireless terminal and receiving data from said wireless terminal in said access point (col 3 lines 64-65)**  
**b) performing a check to determine whether there is an error in said data which was received from said wireless terminal in said access point in the step (a) (col 3 lines 65-67).**

**c) sending an error occurrence message and allocating a wireless resource for retransmission of data to said wireless terminal simultaneously when the access point detects a data error in the step (b) (col 3 lines 67, col 4 lines 1-3).** Buchholz does not show one frame comprising the down-link period and an up-link period. However, Bauchot teaches that one frame comprising the down-link period and an up-link period (see figures 11, col 3 lines 10-25), in the case of error occurrence when mobile requests

the base station for allocation of data transmission. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to use the above teaching of Bauchot with Buchholz, in order to minimize the deterioration in the transmission efficiency, and reduce the delay time.

3. **Claims 3, 5,** are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz et al (US Patent Number 5,555,266) in the view of Bauchot et al. (US Patent Number 6,141,336) and in the further view of Johnston (US Patent Number 6,064,649). Regarding **Claim 3**, Buchholz fails to teach a wireless resource allocation method wherein said downlink period comprises a broadcast period, and a download reservation period. However Bauchot further teaches a wireless resource allocation method wherein said downlink period comprises a broadcast period, and a download reservation period (See figure 11, col 4 lines 37-49, col 5 lines 15-30). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Bauchot with Buchholz, in order to overcoming a delay-oriented scheduling system by using the arrival time of the data cells for determining a deadline of each cell before which the cell has to be transmitted in order to meet a required quality of service.

The combination of Buchholz and Bauchot fails to teach a wireless resource allocation method wherein said downlink period comprises a preamble for synchronization. However Johnston teaches a wireless resource allocation method wherein said downlink period comprises a preamble for synchronization (col 3 lines 29-39). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Johnston with the combination of Buchholz modified by

Bauchot, in order to reduce transmission delay and to prevent decreasing an actual data transmission rate.

Regarding **Claim 5**, Buchholz fails to show that a wireless resource allocation method wherein during said down-link period, said access point transmits a broadcast message and various control information. However Bauchot teaches a wireless resource allocation method wherein during said down-link period, said access point transmits a broadcast message and various control information (See figure 11, col 4 lines 37-49, col 5 lines 15-30). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Bauchot with Buchholz, in order to overcoming a delay-oriented scheduling system by using the arrival time of the data cells for determining a deadline of each cell before which the cell has to be transmitted in order to meet a required quality of service.

4. .**Claim 4**, is rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz et al (US Patent Number 5,898,679), in view of Bauchot et al. (US Patent Number 6,141,336) in the further view of Patel (US Patent Number 5,953,706).

Regarding **claim 4**, the combination of Buchholz and Bauchot fails to teach a wireless resource allocation method wherein the up-link period comprises a contention period and an upload preservation period. However Patel teach a wireless resource allocation method wherein the up-link period comprises a contention period and an upload preservation period (col 3 lines 59-65-col 4 lines 1-10). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching

of Patel with the combination of Buchholz modified by Bauchot, in order to provide a system with less error by reducing the stages where data is manually relayed and transcribed by various service providers.

5. **Claim 6**, is rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz et al (US Patent Number 5,555,266) and Bauchot et al. (US Patent Number 6,141,336) and in view of Johnston (US Patent Number 6,064,649) in the further view of Patel (US Patent Number 5,953,706).

Regarding **claim 6**, the combination of Buchholz, Bauchot and Johnston fails a wireless resource allocation method wherein various control information includes not acknowledge information the wireless terminal transmitted to the access point during the upload reservation period of a previous frame. However Patel teaches a wireless resource allocation method wherein an acknowledge information or not acknowledge information the wireless terminal transmitted to the access point during the upload reservation period of a previous frame (col 6 lines 35-51). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching of Patel with the combination of Buchholz, Bauchot modified by Johnston, by centrally control network reduce the cost of the telephone communication, and provide more availability of services to users, because not every service provider will have a relationship with a counterpart service provider in every other city.

6. **Claim 8,** is rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz et al. (US Patent Number 5,555,266) in view of Fischer et al (US Patent Number 5,889,772).

Regarding **Claim 8**, Buchholz teaches a wireless resource allocation method in a wireless communication system including a plurality of wireless terminals and a single access point having a bridge function, the method comprising the steps of:

- a) allocating a wireless resource to a corresponding wireless terminal and receiving data from said wireless terminal in said access point (col 3 lines 64-65)**
- b) performing a check to determine whether there is an error in said data which was received from said wireless terminal in said access point in the step (a) (col 3 lines 65-67).**
- c) sending an error occurrence message and allocating a wireless resource for retransmission of data to said wireless terminal simultaneously when the access point detects a data error in the step (b) (col 3 lines 67, col 4 lines 1-3).**

Buchholz fails to teach a wireless resource allocation method in a wireless communication system wherein the step of c) allocates the wireless resources the error occurs in the received data without informing the corresponding wireless terminal of error occurrence. However Fischer teaches a wireless resource allocation method in a wireless communication system wherein the step of c) allocates the wireless resources the error occurs in the received data without informing the corresponding wireless terminal of error occurrence (col 12 lines 65-67, col 13 lines 1-10). Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to use the above teaching of Fischer

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Fischer with Buchholz, in order to minimize the deterioration in the transmission efficiency by adjusting the number of bit error rate attempts made to transmit each frame.

***Response to Arguments***

7. Applicant's arguments with respect to claims 2-6, 8, have been considered but are moot in view of the new ground(s) of rejection.

**Conclusion**

8. **Any responses to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 872-9314, (for formal communications indented for entry)

**Or:**

(703) 308-6306, (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121  
Crystal Drive, Arlington, Va., sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Melody Mehrpour whose telephone number is (703) 308-7159. The examiner can normally be reached on Monday through Thursday (first week of

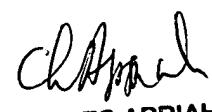
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bi-week) and Monday through Friday (second week of bi-week) from 6:30 a.m. to 5:00 p.m.

If attempt to reach the examiner are unsuccessful the examiner's supervisor, Marsha Banks-Harold be reached (703)305-4379.

NM

July 1, 2004



CHARLES APPIAH  
PRIMARY EXAMINER